

# Personal Income in Metropolitan Areas: A New Series

WITH the publication here of estimates of personal income in 97 standard metropolitan statistical areas (SMSA's) for 5 selected years of the period 1929 to 1962, the Office of Business Economics adds a new dimension to its system of regional economic information.

This article contains the first official estimates of total and per capita per-

sonal income in selected SMSA's for the years 1929, 1940, 1950, 1959, and 1962 (table 1). Also included are estimates for the non-SMSA portion of each State. These were derived by summing the estimates for those counties that lie outside of SMSA's. A breakdown of major sources of income is shown for each area in table 2. Analytical measures are provided in tables 1 and 3, as well as in the text tables.

This report is part of a larger project that will cover all SMSA's in the United States. Because of the length of the study and because the estimates are prepared by groups of States, the results are being presented in stages as they become available. Estimates for the SMSA's not covered here will be published in the SURVEY later this year. Additional detail on industrial sources of income in each SMSA is being developed and will be published when completed. It is anticipated that the series for all SMSA's will be updated to 1965 and 1966 during 1968, and be continued thereafter on an annual basis.

### Personal income defined

Personal income is the current income received by persons in an area from all sources. It is measured before deduction of income tax and other direct personal taxes, but after deduction of personal contributions to social security, government retirement, and other social insurance programs.

Personal income is the most comprehensive economic measure available on a geographic basis. It includes the in-

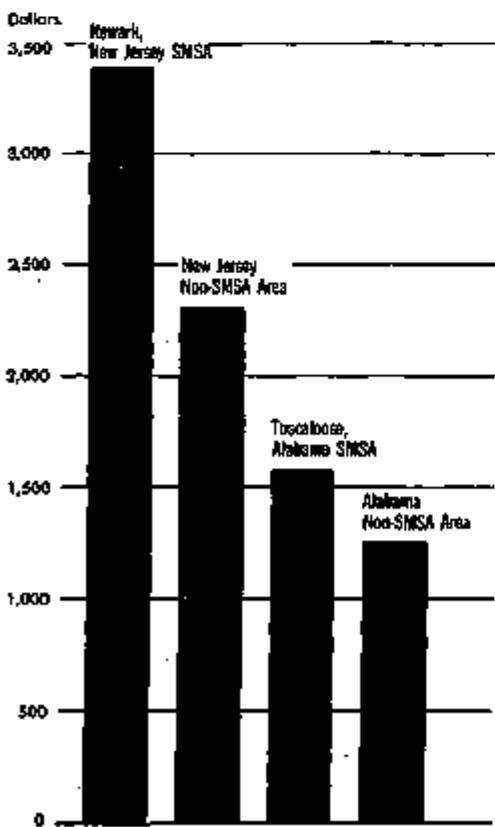
come received from business, Federal and State and local governments, households and institutions, and foreign countries. It consists of wages and salaries (in cash and in kind and including tips and bonuses as well as contractual compensation), various types of supplementary earnings termed "other labor income" (the largest item being employer contributions to private pension and welfare funds), the net incomes of owners of unincorporated businesses (farm and nonfarm), net rental income, dividends, interest, and government and business "transfer payments" (consisting in general of disbursements to persons for which no services are rendered currently, such as unemployment benefits and social security payments).

### Comparison with State totals

No State totals (or averages) are shown in the accompanying tables, and in those States where one or more SMSA's cut across State boundaries, none should be derived by summing the figures for SMSA's and non-SMSA's. In such cases, the sum of the SMSA's and non-SMSA's would not equal OBE's State totals of personal income as published in the April 1967 SURVEY. Where an SMSA is located in more than a single State, the income of the entire SMSA is listed in the State with which the SMSA is generally identified. For example, personal income in the Philadelphia SMSA includes income received by residents of both Pennsylvania and New Jersey. In these tables, the total is classified under Pennsylvania since the SMSA is customarily identified with that State. In the State series, on the other hand, the

CHART 5

### Highest and Lowest Per Capita Incomes Among SMSA's and Non-SMSA's in 24-State Area, 1962



Note.—The SMSA estimates were prepared by Sandra Bodine, Margaret Cannon, Vivian Conklin, Francis Dellevalle, Linda Haven, Jerry Lounsbury, Elizabeth Queen, Rosalie Roberts, George Smith, and Lyle Spatz.

income referred to is allocated between Pennsylvania and New Jersey according to the residence of its recipients. It is important to note that income in the non-SMSA area of each State is unambiguous in this respect. Totals derived by combining SMSA's and non-SMSA's undoubtedly would be meaningful in their own right. The caveat given here against them is to avoid having two different figures for total personal income in a State.

#### Scope of the text

The text of the article is intended to summarize some of the major highlights of the data, with the main emphasis on long-term changes. No attempt has been made to make a comprehensive or detailed analysis; this must await the completion of the full set of statistics. Moreover, neither the general nor the specific conclusions made here are intended to apply to the SMSA's or to the non-SMSA's in the rest of the country. Since the factors underlying income growth in the other areas of the Nation are quite different from those that characterize the

eastern and northwestern sections, income developments in SMSA's and non-SMSA's of other areas may well be different.

#### Regional classification

For purposes of this report, the 24 States and the District of Columbia are classified into three groups. The Northeast includes Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, the District of Columbia, and Ohio—OBE's New England and Mideast regions plus Ohio. The Southeast as used here includes Virginia, West Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, and Alabama—all except four States of OBE's Southeast region. The Northwest includes Washington, Oregon, Idaho, and Montana—parts of OBE's Far West and Rocky Mountain regions. When the estimates for all SMSA's have been completed, OBE's usual regional classification of the States will be used.

closer together. In 1929, per capita income in SMSA's was about two and one-half times that in non-SMSA's; by 1962, it was three-fifths higher.

#### Total personal income

The slower growth of total income in SMSA's than in non-SMSA's reflects the fact that the Northeast, where this relationship prevailed, accounts for four-fifths of all SMSA income and one-half of all non-SMSA income in the 24 States. Thus, the summary changes noted picture mainly developments in the Northeast as modified by the different situations in the Southeast and Northwest.

Within the Northeast, the more rapid rise of total income in non-SMSA's was due to the faster growth in non-SMSA's of both government and manufacturing activity—as measured by changes in wages and salaries.

Among Northeastern States, total income lagged in two of every three SMSA's. An even higher ratio would have obtained—almost three out of four—had not the decline in mining wages and salaries in the non-SMSA portion of Pennsylvania held the growth of total income in that area to a rate below that in a number of the State's SMSA's.

In the Southeastern States, total income rose faster in SMSA's than in non-SMSA's. The major cause of the difference was the migration from rural to urban areas. As table A shows, the population of SMSA's in the

### Summary Changes in Income and Population SMSA's Versus Non-SMSA's

Table A shows the longrun relative changes that have occurred in personal income, population, and per capita income over the 1929-62 period. For the 24-State area and for the three broad geographical groups into which the States have been classified, the comparisons show the changes that have occurred in SMSA's and non-SMSA's.

From 1929 to 1962, personal income in the 97 SMSA's covered in this study rose 333 percent. For the non-SMSA portions of the 24 States involved, the increase was 427 percent. Accompanying these increases were population gains of 52 percent in SMSA's and 23 percent in non-SMSA's. With total income in SMSA's growing less rapidly than in non-SMSA's, but with population in the more urbanized areas rising twice as fast in relative terms, per capita income grew much more rapidly

in non-SMSA's (328 percent) than in SMSA's (185 percent). These sharply divergent rates of growth brought average income in the two areas much

Table A.—Percent Changes in Personal Income, Population, and Per Capita Income, by SMSA and Non-SMSA Areas, Selected Years, 1929-62

|                   | 1929 to 1960 |            | 1950 to 1962 |            | 1929 to 1962 |            |
|-------------------|--------------|------------|--------------|------------|--------------|------------|
|                   | SMSA's       | Non-SMSA's | SMSA's       | Non-SMSA's | SMSA's       | Non-SMSA's |
| 24-State Area     |              |            |              |            |              |            |
| Total income      | 120          | 108        | 89           | 77         | 333          | 427        |
| Population        | 23           | 14         | 21           | 8          | 52           | 23         |
| Per capita income | 83           | 100        | 56           | 64         | 185          | 328        |
| Northeast         |              |            |              |            |              |            |
| Total income      | 116          | 128        | 86           | 85         | 301          | 367        |
| Population        | 21           | 12         | 19           | 15         | 44           | 31         |
| Per capita income | 70           | 128        | 66           | 85         | 179          | 249        |
| Southeast         |              |            |              |            |              |            |
| Total income      | 230          | 246        | 167          | 75         | 604          | 802        |
| Population        | 45           | 32         | 29           | 2          | 87           | 14         |
| Per capita income | 134          | 207        | 50           | 73         | 375          | 427        |
| Northwest         |              |            |              |            |              |            |
| Total income      | 236          | 262        | 96           | 64         | 515          | 494        |
| Population        | 61           | 36         | 29           | 13         | 107          | 53         |
| Per capita income | 106          | 107        | 64           | 43         | 224          | 289        |

Note.—For definition of regions, see "Regional classification," p. 12.

Southeast nearly doubled from 1929 to 1962, while the increase in non-SMSA's was only 14 percent—less than might have been expected from natural increase (the difference between births and deaths) in population in the area. Major factors inducing the migration were the depressed condition of southeastern agriculture and the growing industrial opportunities for employment in the area's SMSA's.

Among individual SMSA's, the situation was the opposite of that in the Northeast. In two out of three SMSA's in the Southeastern States, total income rose faster from 1929 to 1962 than did income in non-SMSA's.

In the four Northwestern States also, total income grew more rapidly in SMSA's than in non-SMSA's. More rapid population growth and the relative decline of agricultural income were contributing factors.

#### *Population*

In each of the three areas—the Northeast, Southeast, and Northwest—population grew much more rapidly in SMSA's than in non-SMSA's. As has already been noted, in the Southeastern States there was a five-fold differential; in the Northwest, the rate in SMSA's was double that in non-SMSA's. In the densely populated Northeast, the population of SMSA's grew only 40 percent more rapidly than that of non-SMSA's.

#### *Per capita income*

As a result of the relative changes in total income and population, per capita income rose more in the non-SMSA's of each group of States than the SMSA's. The margin was largest in the Southeastern States (nearly three-fifths), second largest in the Northeast (two-fifths), and smallest in the Northwest (almost one-third). Nevertheless, as the following tabulation shows, the widest relative disparity in per capita income between SMSA's and non-SMSA's remains in the Southeastern States. Also of interest is the fact that per capita income in SMSA's of the Southeastern States is about the same as in non-SMSA's of the other two groups of States—a little higher than non-SMSA's of the Northeast and almost identical to those in the Northwest.

Per Capita Income, 1962

|                 | SMSA's  | Non-SMSA's |
|-----------------|---------|------------|
| All States..... | \$2,715 | \$1,663    |
| Northeast.....  | 2,629   | 2,000      |
| Southeast.....  | 2,158   | 1,335      |
| Northwest.....  | 2,976   | 2,160      |

#### *Summary of SMSA and non-SMSA changes*

To explain the above patterns is beyond the scope of this article, although migration studies now underway will provide some answers. With regard to per capita income, however, one may speculate that the section of the population that migrated from the non-metropolitan areas to the metropolitan areas has so far been unable to achieve

the income levels of its new environment and, therefore, has limited the relative rise of average income in SMSA's. This is the root of many of the problems facing metropolitan areas today—notably the central cities. In the meantime, the areas that the migrants left have experienced rapid development and income growth—both total and per capita.

The foregoing summary of overall relative changes in economic conditions in SMSA's and non-SMSA's is limited to the areas covered in this report. It may or may not reflect relationships in other parts of the Nation. This can be determined only upon completion of income estimates for SMSA's and non-SMSA's in the rest of the Nation.

## Changes in Total Personal Income—SMSA's

There were wide differences among individual SMSA's in rates of income change from 1929 to 1962. No SMSA experienced a decline. Increases ranged from about 100 percent in the Wilkes Barre-Hazleton, Pennsylvania, SMSA, to 18 times this rate of increase in the Fayetteville, North Carolina, SMSA. In 24 SMSA's—the top one-fourth—the 1929-62 income rise was more than 650 percent, as compared with an average increase of 413 percent for the Nation as a whole. Of these 24 metropolitan areas, 19 are located in the Southeast, while 4 are in the Northwestern part of the country.

In contrast, 11 SMSA's showed increases of 250 percent or less. These are located in a group of States extending from Massachusetts southwest through West Virginia and including New York, Pennsylvania, Rhode Island, and New Jersey. Five of the SMSA's with the slowest rates of growth are in Pennsylvania.

In individual metropolitan areas (and nonmetropolitan areas as well), income generally moved in conformity with changes in State totals over the long-span 1929-62. Of the 55 SMSA's in which income grew faster than in the Nation as a whole, 38 are located in

States with an income uptrend, while 17 are in States with a declining trend in income. Similarly, of the 42 SMSA's in which income rose at a less-than-average rate, 39 are located in States with relatively slow income growth, and only 3 are in States where income is growing rapidly.

#### *Factors affecting income change*

Several theories have been used to explain regional differences in rates of income growth. One of the most widely used is the export-base theory. According to this explanation, the economic growth of geographical areas within the Nation depends primarily on changes in the industries that make up its "export-base," that is, those industries producing for "export"—to other areas of the country or abroad—rather than for local consumption. Agriculture, forestry, fishing, manufacturing, mining, and Federal Government are generally considered export-base industries even though a portion of their production—usually quite minor—may serve local consumers. In addition, those parts of several industries that reflect such activities as a regional or national university or re-

search center, a recreational or financial center, or a State government agency are also export-base industries in some degree. A rise in the production of export-base industries brings about a direct increase in employment and income in the area. The payroll increase results in further demands for goods and services produced in the area for local consumption and consequently a payroll expansion in local industries. These induced changes in income at the local level are the result of a "multiplier effect," which is analogous to the multiplier that plays a central role in the theory of national income determination.

In the assessment of the role of an export-base industry (or industries) in regional or local growth, two factors must be taken into account: the importance of the industry as an income source in the area's economy and the rate of change in income produced by the industry.<sup>1</sup> Obviously, an industry that has experienced spectacular growth but that accounts for only a very small proportion of an area's total income may have a comparatively small effect on overall income growth.

For SMSA's, manufacturing, government,<sup>2</sup> and mining had the greatest impact on changes in income from 1929 to 1962. Nationally, manufacturing payrolls in 1929 accounted for four times as large a proportion of wages and salaries as government payrolls (35 percent, as compared with 9 percent), but government payrolls expanded nearly twice as much from 1929 to 1962 as factory wages and salaries (ninemold,

as compared with fivefold). Geographic variations in these proportions and in rates of change were responsible for differences in the contribution of the two industries to overall income growth in the various areas. Mining payrolls account for only 1 percent of total personal income on a national basis, but because of the high geographic concentration of minerals, the industry exercised significant influence on changes in the income flow in specific locations.

#### *Role of government*

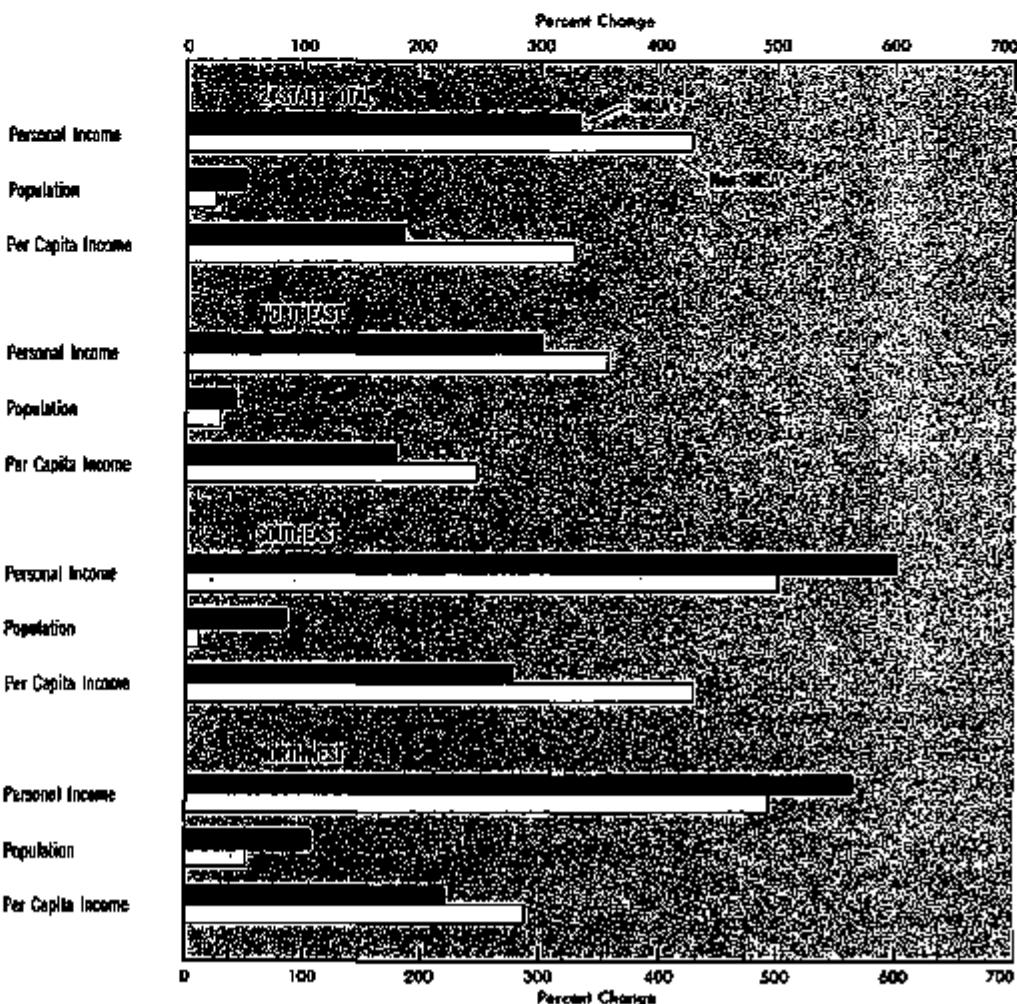
Expanded government payrolls were a major factor in the income increase that characterized all SMSA's from 1929 to 1962. Although there were wide

variations in rates of change among individual SMSA's, in every instance the percentage rise in wages and salaries paid out by governments was more than the average for all other income components combined.

In 18 of the 24 SMSA's with the largest income expansion from 1929 to 1962, the rise in wages and salaries paid out by government was primarily responsible. In three of the remaining six areas, government payrolls played an important but subordinate role. The outstanding examples of economic growth directly attributable to government activity are afforded by Fayetteville, North Carolina; Huntsville, Alabama; Albany, Georgia; Newport

CHART 6

#### Percent Change in Total Personal Income, Population, and Per Capita Income, 1929-62 by SMSA's and Non-SMSA's



<sup>1</sup> The importance of an industry in accounting for an area's rate of income growth relative to that of the Nation was determined in the following way. Rates of change in total income in the area and in the Nation were calculated. Income in each industry under evaluation (wages and salaries or proprietors' incomes) was then deducted from aggregate income in both the area and the Nation and rates of growth in the resulting partial aggregates were computed. The industry causing the largest relative change in the difference between area and national rates of growth was considered the industry primarily responsible for the area's income experience vis-a-vis the Nation.

<sup>2</sup> Only the Federal component of total government is usually considered an export-base industry, although State government activities serving areas outside the SMSA are also classed as export-base. Because it was not possible to separate Federal from State and local payrolls in the earlier years of this study, the total is used in this analysis. Such a separation will be made for 1963 and all subsequent years in future publications.

News-Hampton and Norfolk-Portsmouth, Virginia; Columbia, South Carolina; and Augusta and Columbus, Georgia. Each of these SMSA's is the site of one or more major Federal installations.

The overwhelming importance of government as an income source in these eight metropolitan areas is shown in table 3. Government wages and salaries account for as much as one-fourth to one-half of all personal income in these areas. Although the importance of government was much less in earlier years, it was still impressive—ranging from one-tenth to more than one-half in 1950, and from 3 percent to 28 percent in 1929. Reinforcing the weight of government in the income flow is the fact that the 1929-62 expansion in government payrolls in these regions ranged from an increase of a little more than 1,000 percent to gains more than 12 times as large.

Even in SMSA's with below-average rates of total income growth, government payrolls expanded at faster rates than did income from all other sources combined. However, as table 3 shows, government payrolls accounted for a comparatively small proportion of total income in these areas, generally from 5 to 10 percent. Accordingly, their leverage on total income growth was limited.

#### *Mining grows slowly*

Declines or very small increases in wages and salaries paid out in the mining industry were the major factor determining the rate of income gain in five of the eight SMSA's with the smallest income increases from 1929 to 1962. In these areas, mining wages and salaries made up from 5 to 35 percent of total income in 1929, and in four of them, mining payrolls declined from 1929 to 1962. To further aggravate the situation, the growth of manufacturing, which was also very important in the income structure of each of these areas, was far below average in three areas, somewhat smaller in one, and only average in the remaining SMSA.

#### *Contribution of manufacturing*

Because manufacturing is the primary export-base industry in the United States, variations in its expansion from 1929 to 1962 contributed

substantially to differences in rates of economic growth among SMSA's. Percentage increases in manufacturing payrolls ranged from more than 1,000 percent in several metropolitan areas to less than 200 percent in three SMSA's.

Except for the 23 SMSA's in which government or mining was the major determinant of income growth, manufacturing payrolls played the principal role in setting SMSA trends in total income. Generally speaking, as manufacturing went, so went the entire economy of an SMSA. In the great majority of cases, the change in total personal income in an area, relative to the change for the country as a whole, was the same as in manufacturing.

So dominant was the influence of manufacturing on area rates of income growth that in only 11 metropolitan areas where total income growth was above average did the growth in manufacturing payrolls fall below average, and in only five SMSA's where factory payrolls exceeded the national rate of growth did total income fall somewhat short. In each of these instances, special

factors caused the departure from usual relationships.

#### *Changes in other industries*

As one would expect from the export-base theory of regional growth, most other industries in each SMSA changed in accordance with changes in its export-base industries. In some cases, however, the export-base industry cannot be clearly identified. For example, Great Falls and Billings, Montana, and Boise City, Idaho, each serve as a trade center for the surrounding counties beyond the SMSA. Accordingly, a significant portion of retail and wholesale trade in those SMSA's must be classed as export-base. Much of the trade and service industry in Boston, Atlantic City, Atlanta, and Nashville is also export-base. Finally, because of New York's unique position in the Nation's economy, a portion of the product of nearly all major industries in that SMSA is exported to other parts of the country. In these cases, no one or two industries seemed to be the dominant factor in regional growth.

### Changes in Total Personal Income—Non-SMSA Areas

Although the main emphasis of this report is on SMSA's, the tables show the income received by residents of the non-SMSA portion of each State. These non-SMSA areas contain approximately one-third of the population of the 24-State area and nearly one-fourth of the areas' total income. From 1929 to 1962, combined income in the non-SMSA areas of the 24 States increased a little faster than in the Nation—427 percent, as compared with 413 percent. The major factors underlying this expansion were the increases in government and manufacturing payrolls. Most of the growth in government payrolls in non-SMSA's was accomplished by 1950 and, to a large extent, represented the establishment of Federal military installations in the South during and immediately prior to World War II. The increased share of factory wages and salaries received in non-SMSA's reflects

the shift of manufacturing from the "old manufacturing belt" to the South, a trend that appears to have operated over the entire 1929-62 span.

For all non-SMSA areas together, increases in manufacturing and government payrolls contributed to the rise in approximately equal proportions. From 1929 to 1962, wages and salaries of government employees in non-SMSA areas increased nearly 14 times, while manufacturing payrolls increased more than 600 percent. So much faster was the rise of income from these two sources in non-SMSA's than in SMSA's that, over this span, the non-SMSA areas increased their share of the 24-State total of income from manufacturing wages and salaries by two-fifths and their share of government payrolls by one-half.

Income changes in non-SMSA areas were heavily influenced by the relative

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decline of agriculture as an income source. Gains in farming in non-SMSA areas were smaller than in any other major industry and so tended to limit the overall income gains in non-SMSA areas. With agriculture contributing nearly one-fifth of total income in areas outside of SMSA's in 1929, the small increase in farm income was a very important dampening influence on the rise in total income. If farm income is excluded from the computations, the rate of growth in non-SMSA areas is more than 50 percent larger than that in SMSA's. With farm income included, the differential is less than one-third.

The relative income experience of most individual non-SMSA portions of each State was in accord with the experience of the State as a whole—that is, if income in the State grew faster than the average for the Nation as a whole, so did the non-SMSA portion.

There were four exceptions—New Jersey, Connecticut, Ohio, and Kentucky. Each of the first three States recorded a less-than-average expansion in total income from 1929 to 1962, while the non-SMSA portion of each State scored an above-average gain. In Kentucky, on the other hand, growth of total income over this long span was at a little faster rate than in the Nation, but the non-SMSA part of the State experienced an income lag from 1929 to 1962.

In New Jersey and Ohio, both manufacturing and government were primarily responsible for the improvement in non-SMSA areas. In Connecticut, the relative advance was due almost entirely to an expansion in government payrolls. In the non-SMSA portion of Kentucky, manufacturing and government imparted strong relative boosts to the income flow; however, the effect of these was more than offset by lags in farm income and mining payrolls.

decline of farm income reduced the importance of proprietors' incomes in non-SMSA's and, conversely, increased the importance of other income sources—mainly wages and salaries. In addition, the sizable growth of governmental and manufacturing activities in non-SMSA's also contributed directly to the increases of wages and salaries as an income source in these areas.

As a result of these developments, the income structures of SMSA's and non-SMSA's were much more similar in 1962 than in 1929. The major differences remaining included: the larger importance of wages and salaries in SMSA's (a reflection of the concentration there of the distributive and service industries); and the larger role of proprietors' incomes in non-SMSA's (a result of the presence of farm income). Property income, meanwhile, was of roughly equal importance in the two areas.

## Changes in Income Composition

Significant shifts in income composition occurred between 1929 and 1962 in the Nation as a whole and in both SMSA's and non-SMSA's. Table 3 shows the major changes in SMSA's and non-SMSA's. Nationally, wages and salaries rose in importance between 1929 and 1962, as government payrolls expanded greatly. The importance of

private wages and salaries as an income source remained relatively constant over this period, but within the private sector, factory payrolls increased, while other payrolls decreased in importance as income sources. The importance of proprietors' incomes in the Nation's income structure declined one-third from 1929 to 1962 as farm income rose very slowly, and the income of nonfarm proprietors' increased somewhat less than most other income flows. Finally, property income, which accounted for more than one-fifth of personal income in 1929, increased about half as fast as total personal income, and by 1962 made up only one-seventh of all income.

Table B shows that these changes significantly reduced the differences in the composition of incomes received in SMSA's and non-SMSA's. With property income concentrated heavily in SMSA's, the relative reduction of this source of income affected mainly the metropolitan areas and caused concomitant increases in the importance of both wages and salaries. The

Table B.—Selected Sources of Total Income, by SMSA and Non-SMSA, 1929 and 1962

| Selected sources of income  | Percent of total income |                     |             |                     |
|-----------------------------|-------------------------|---------------------|-------------|---------------------|
|                             | 1929                    |                     | 1962        |                     |
|                             | %<br>SMSA's             | %<br>Non-<br>SMSA's | %<br>SMSA's | %<br>Non-<br>SMSA's |
| Total income                | 100                     | 100                 | 100         | 100                 |
| Wages and salaries—total    | 62                      | 53                  | 70          | 69                  |
| Manufacturing<br>Government | 22                      | 16                  | 24          | 23                  |
| Proprietors' incomes—total  | 11                      | 29                  | 8           | 15                  |
| Farm                        | 1                       | 19                  | (1)         | 7                   |
| Nonfarm                     | 10                      | 11                  | 8           | 8                   |
| Property income             | 25                      | 15                  | 14          | 13                  |

<sup>1</sup> Less than one-half of 1 percent.Table C.—Range of Differences in Per Capita Income, 1929 and 1962<sup>1</sup>

|                            | 1929    |                  | 1962    |                  |
|----------------------------|---------|------------------|---------|------------------|
|                            | Dollars | Per cent of U.S. | Dollars | Per cent of U.S. |
| SMSA's                     |         |                  |         |                  |
| High income SMSA's         |         |                  |         |                  |
| Newark, New Jersey         | 1,181   | 168              | 3,449   | 146              |
| Jersey City, New Jersey    | 950     | 130              | 3,288   | 141              |
| Low income SMSA's          |         |                  |         |                  |
| Charleston, South Carolina | 427     | 61               | 1,681   | 67               |
| Tuscaloosa, Alabama        | 220     | 36               | 1,573   | 66               |
| Non-SMSA's                 |         |                  |         |                  |
| High income Non-SMSA's     |         |                  |         |                  |
| New Jersey                 | 724     | 103              | 2,303   | 97               |
| Connecticut                | 728     | 103              | 2,285   | 97               |
| Low income Non-SMSA's      |         |                  |         |                  |
| Georgia                    | 290     | 33               | 1,239   | 54               |
| Alabama                    | 218     | 31               | 1,234   | 53               |
| States in study            |         |                  |         |                  |
| High income States         |         |                  |         |                  |
| Delaware                   | 1,037   | 147              | 3,014   | 127              |
| Connecticut                | 981     | 141              | 2,996   | 124              |
| Low income States          |         |                  |         |                  |
| Alabama                    | 222     | 36               | 1,577   | 67               |
| South Carolina             | 209     | 38               | 1,681   | 66               |

<sup>1</sup> Rankings based on 1962 data.

Note.—Comparisons are based on the 24 States covered in this report.

## Per Capita Personal Income

Per capita personal income (total income divided by total population) is the most comprehensive statistic currently available for measuring differences in economic welfare on a detailed geographic basis. Per capita personal income, it may be noted, includes noncash items such as food and lodging furnished workers in certain industries, the value of food and fuel produced on the farm and consumed by the farm family, and some imputed rent and interest. Because it includes income in kind, comparisons of income differences among areas are more meaningful than those based on money income alone. However, a major weakness of the measure is that it does not take into account regional differences in the cost of living. While price indexes have been constructed to eliminate geographic differences in changes in the cost of living over time, there are no satisfactory measures designed to eliminate area differences in living costs at any given time.

Table 1 shows the wide differences in per capita income among the 97 SMSA's covered in this report. These differences are highlighted in the text tables C and D. Per capita income in 1962 for all 97 areas combined was \$2,715. Incomes ranged from a high of \$3,449 in the Newark, New Jersey SMSA to a low of \$1,573 in Tuscaloosa, Alabama—a difference of approximately 120 percent. There were 8 SMSA's in the study with average incomes of more than \$3,000 in 1962. These include Newark, New Jersey (\$3,449); Jersey City, New Jersey (\$3,338); New York, New York (\$3,299); Hartford-New Britain, Connecticut (\$3,260); Wilmington, Delaware (\$3,143); Seattle-Everett, Washington (\$3,091); Washington, D.C. (\$3,043), and Bridgeport-Norwalk-Stamford, Connecticut (\$3,029). All of these SMSA's, with the exception of

Seattle-Everett, are in the Northeast region, with four of them comparatively close to New York City.

In contrast, there were seven SMSA's with per capita income below \$1,700. These included Mobile, Alabama (\$1,699); Gadsden, Alabama (\$1,690); Albany, Georgia (\$1,686); Johnstown, Pennsylvania (\$1,665); Wilmington, North Carolina (\$1,633); Charleston, South Carolina (\$1,581), and Tuscaloosa, Alabama (\$1,573). With the exception of Johnstown, all of these low-income SMSA's are located in States of the Deep South.

Of the 35 southeastern SMSA's covered by the study, in only one—Richmond, Virginia—was per capita income above the national average in each year for which estimates have been made. Atlanta, Greensboro-High Point, Newport News-Hampton and Winston-Salem each were above average in 3 or 4 of the 5 years, while Norfolk-Portsmouth and Charlotte recorded above average incomes in 2 of the 5 years. In contrast, most SMSA's of the Northeast and Northwest had per capita incomes above the national average throughout the 33-year span.

Per capita income in non-SMSA's in 1962 ranged from \$2,303 in New Jersey to \$1,254 in Alabama and averaged \$1,693, nearly two-fifths below the SMSA average. Indeed, of the 97 SMSA's in the study, in only 4 were average incomes in 1962 below the non-SMSA portion of the State in which they were located. These were Fall River-New Bedford, Massachusetts; Atlantic City, New Jersey; Salem, Oregon; and Johnstown, Pennsylvania.

Inequality of income is somewhat less among SMSA's than among non-SMSA's. In 1962, the coefficient of variation in the former areas was 18; among non-SMSA's, it was 20. When coefficients of variation are computed for the States, the disparity in per capita income increases sharply over that shown in either of the two individual series. For the 24 States and the District of Columbia, the coefficient of variation in 1962 was 25.<sup>3</sup>

The fact that variations in per capita incomes are more pronounced when measured at the State level than when measured at either the SMSA or non-SMSA level reflects the widely different weights with which the relatively high incomes in SMSA's are combined with the relatively low incomes in non-SMSA's. In Massachusetts, for example 37 times as many persons live in SMSA's as in non-SMSA areas; in Idaho, SMSA's account for one-seventh of the State's population.

<sup>3</sup>The coefficient of variation is defined as the standard deviation of the per capita income distribution divided by the arithmetic mean of the per capita incomes. The standard deviation is the square root of the mean of the squared deviations of per capita incomes from their arithmetic mean.

Table D.—Distribution of SMSA's by Ratio of Per Capita Income in SMSA to Per Capita Income in United States, 1929 and 1962

| Percent of U.S. per capita income | 1929      |           |           | 1962      |           |           |
|-----------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                   | Northeast | Northwest | Southeast | Northeast | Northwest | Southeast |
| 30-39                             |           |           |           | 1         |           |           |
| 40-49                             |           |           |           | 2         |           |           |
| 50-59                             |           |           |           | 2         |           |           |
| 60-69                             |           |           | 1         | 0         |           |           |
| 70-79                             | 1         | 1         | 6         | 2         |           |           |
| 80-89                             | 3         | 3         | 3         | 5         | 1         | 1         |
| 90-99                             | 12        | 1         | 4         | 11        | 9         | 9         |
| 100-109                           | 9         | 2         | 1         | 16        | 3         | 3         |
| 110-119                           | 7         | 2         | 2         | 8         | 1         | 2         |
| 120-129                           | 7         | 1         | 3         | 8         |           |           |
| 130-139                           | 6         | 2         | 3         | 3         | 1         |           |
| 140-149                           | 2         |           |           | 2         |           |           |
| 150 plus                          | 3         |           |           |           |           |           |
|                                   | 33        | 9         | 25        | 33        | 9         | 35        |

Note.—As used here, the Northeast includes the States in O'Reilly's New England and Midwest regions plus Ohio; the Northwest includes Washington, Oregon, Idaho, and Montana; the Southeast includes Virginia, West Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, and Alabama.

**Changes in per capita income**

Since 1929, there has been an appreciable reduction in per capita income differences among SMSA's, non-SMSA's, and States, as the tabulation below shows. Among SMSA's, this reduction in inequality has resulted from the less-than-average growth rates in high-income SMSA's and the above-average rates of growth among low-

income areas. Although there are exceptions, this generalization is well established in these data.

Coefficients of Variation in Per Capita Income

|   | 1929 | 1962 |
|---|------|------|
| All SMSA's.....                             | 29   | 18   |
| Non-SMSA's of 24 States.....                | 38   | 20   |
| 24 States and the District of Columbia..... | 21   | 26   |

**Income by Size of Metropolitan Area**

Population size appears to be associated with the level of per capita income among SMSA's. This is clearly reflected in column 1 of table E, which shows that per capita incomes increase as population size of the SMSA increases. This relationship, together with the fact that SMSA's in the Northeastern States are larger than those in the Southeastern part of the country, explains a part of the per capita income differential between the two sections. However, even among SMSA's of the same size group, per capita incomes in the Southeast are still lower than average.

Table F, which relates several aspects of growth to size of SMSA, provides the basis for two generalizations. First, growth in SMSA's has lagged far behind that of the Nation or the non-SMSA portions of the States covered for all income measures listed in the table but not for population. Second, except for population, and perhaps manufacturing income, there is a strong inverse relationship between size of SMSA and rate of growth.

Property income plays a key role in this inverse relationship. In 1929, there was a direct relationship between the size of SMSA and the relative importance of investments as a source of personal income. In the two largest SMSA groups, property income accounted for nearly one-third of total income; in the four smallest, it made up only one-fifth. From 1929 to 1962, property income expanded in most areas at a slower rate than any other major income source. In addition, the smallest relative gains in property income over the period were in the largest SMSA's while the largest increases

occurred in the smallest. As a result, property income limited the expansion of both total and per capita income in inverse proportion to the size of SMSA.

**TECHNICAL NOTES**

A comprehensive description of the sources of data and methods of estimates used in preparing income estimates in SMSA's will be published upon completion of estimates for the entire country. A description of the general methodology used in constructing the local-area income estimates presented here is contained in an article entitled "Measuring Regional Market Growth" in the January 1959 issue of the SURVEY. Although some of the methods and data sources used in this report are new, the methods outlined in the January 1959 SURVEY provide a summary picture of the overall approach. The following comments relate to special aspects that should be noted now.

**Definition of SMSA's**

The classification of standard metropolitan statistical areas used in this report follows Bureau of the Budget definitions as of May 1966, with the following exceptions: In Vermont, which has no "defined" SMSA, Burlington (Chittenden County) is treated as though it were an SMSA. In New

(Continued on page 44)

Table E.—Per Capita Personal Income by Size of SMSA and Area, 1962

| Population (Thousands) | Dollars                |       |           |           | Index, column 1=100 |           |           |
|------------------------|------------------------|-------|-----------|-----------|---------------------|-----------|-----------|
|                        | All SMSA's<br>in study |       | Northeast | Northwest | Southeast           | Northeast | Northwest |
|                        | (1)                    | (2)   | (3)       | (4)       | (5)                 | (6)       | (7)       |
| 50-99.....             |                        | 2,102 | 2,044     | 2,493     | 1,689               | 101       | 118       |
| 100-149.....           |                        | 2,190 | 2,427     | 2,641     | 2,031               | 111       | 82        |
| 200-399.....           |                        | 2,185 | 2,360     | 2,347     | 2,044               | 103       | 109       |
| 400-799.....           |                        | 2,616 | 2,584     | 2,803     | 1,923               | 103       | 98        |
| 800-1,599.....         |                        | 2,798 | 2,931     | 2,815     | 2,642               | 97        | 106       |
| 1,600-3,199.....       |                        | 2,877 | 2,577     | -         | -                   | 100       | -         |
| 3,200-6,199.....       |                        | 2,750 | 2,750     | -         | -                   | 100       | -         |
| 6,500 plus.....        |                        | 3,299 | 3,299     | -         | -                   | 100       | -         |

Table F.—Percent Change in Population and Selected Measures of Personal Income, by Type of Area and Size of SMSA, 1929-62

| Growth Measure         | United States | 24 States<br>in study | Non-SMSA<br>portions | All<br>SMSA's | SMSA's with Population (in thousands) of: |                   |                   |                 |            |            |            |           |
|------------------------|---------------|-----------------------|----------------------|---------------|---|-------------------|-------------------|-----------------|------------|------------|------------|-----------|
|                        |               |                       |                      |               | More than<br>6,000                        | 3,200 to<br>6,000 | 1,000 to<br>3,200 | 800 to<br>1,000 | 400 to 800 | 200 to 400 | 100 to 200 | 60 to 100 |
| Number of SMSA's.....  |               |                       |                      |               | 1   | 3                 | 5                 | 5               | 21         | 30         | 26         | 8         |
| Personal income.....   | 413           | 352                   | 427                  | 333           | 250                                       | 371               | 355               | 485             | 367        | 427        | 444        | 532       |
| Population.....        | 53            | 41                    | 23                   | 82            | 43  | 53                | 59                | 58              | 50         | 53         | 50         | 50        |
| Per capita income..... | 236           | 221                   | 325                  | 184           | 143                                       | 179               | 190               | 211             | 205        | 241        | 243        | 236       |
| Sources of income—     |               |                       |                      |               |   |                   |                   |                 |            |            |            |           |
| Manufacturing.....     | 501           | 428                   | 630                  | 387           | 509                                       | 343               | 383               | 546             | 367        | 496        | 481        | 473       |
| Government.....        | 1,006         | 581                   | 1,304                | 760           | 679                                       | 667               | 756               | 776             | 1,007      | 1,234      | 1,374      | 1,374     |
| Property.....          | 233           | 156                   | 319                  | 131           | 76  | 71                | 145               | 280             | 197        | 247        | 239        | 274       |





































*(Technical notes continued from page 25)*

England, the Bureau of the Budget defines SMSA's in terms of cities and towns instead of counties. Because adequate data for measuring personal income by cities and towns are not available, it was necessary to redefine SMSA's in New England to conform to a county basis. As indicated by the SMSA names in the tables, many of the New England SMSA's in this study include two or more official SMSA's. Not shown in the tables is the inclusion of the official SMSA's of Brockton, Lawrence-Haverhill, and Lowell in the Boston SMSA as used here.

#### *Population estimates*

SMSA population estimates for 1929, 1940, 1950, and 1959 were obtained by summing county population, which had been derived as follows: For 1929, county population as published in the 1930 "Decennial Census of Population" was used to distribute the Bureau of the Census State estimates as of July 1, 1929. For 1940, county population from the 1940 "Decennial Census of Population" was used to distribute the Bureau of the Census State estimates as of July 1, 1940. For 1950, county population from the 1950 "Decennial Census of Population" was used to distribute the Bureau of the Census State estimates as of July 1, 1950. For 1959, county population as published in the 1960 "Decennial Census of Population" was

used to distribute the Bureau of the Census State estimates as of July 1, 1959.

For 1962, county population data were obtained from all but three of the States covered in this report. Where necessary, these were adjusted to Census State totals as of mid-1962. In Delaware, South Carolina, and Idaho, the 1960 "Decennial Census of Population" was used to distribute Census State estimates as of July 1, 1962.

#### *Portions of SMSA's omitted*

Estimates for the following SMSA's, parts of which are in States covered by this report, have not been completed: Toledo (Ohio-Michigan); Cincinnati (Ohio-Kentucky-Indiana); Evansville (Indiana-Kentucky); Memphis (Tennessee-Arkansas), and Louisville (Kentucky-Indiana).

#### *Residence adjustment*

OBE's State estimates of personal income as published annually in the August SURVEY are on a residence-adjusted basis. That is, in the State series, some components of income are measured according to the State in which the recipient resides; other components reflect the State in which the recipient works. Where employees commute across a State line from home to work, the income totals, as initially measured for the States involved, are partly on a "residence" basis and partly

on a "where-worked" basis. In order to obtain a wholly residence-based series, the incomes of commuters are estimated and transferred from the State in which the recipient works to the State in which he resides.

In preparing the local area estimates, State totals before residence adjustment are allocated to the individual counties of each State. When the counties of the various SMSA's are combined, the differences between place of work and place of residence are eliminated, or at least minimized, and the income aggregate, therefore, measures the total income received by persons in the area (SMSA) on either a "residence" or a "where-worked" basis.

There is one major exception to the foregoing statement in the estimates presented here. In the New York City SMSA, a large number of persons commute from their residences in New Jersey to their places of work in New York City. Although there is a reverse flow of commuters from New York to New Jersey, it is much smaller than the inflow from New Jersey. In order to place the income and population estimates on a comparable basis for the calculation of per capita income, the total income of the New York SMSA was adjusted downward and the totals for the Newark, Jersey City, and Paterson-Clifton-Passaic SMSA's were adjusted upward to take account of commuting between these areas.

